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# 13

HMR2053.ST25  
SEQUENCE LISTING

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MORSE, Clarence  
YAO, Zhengbin

<120> MEMBRANE PENETRATING PEPTIDES AND USES THEREOF

<130> HMR2053 PCT

<140> PCT/US 01/26421

<141> 2001-08-23

<150> US 60/27,647

<151> 2000-08-25

<150> GB 0103110.3

<151> 2001-02-07

<160> 54

<170> PatentIn version 3.0

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<211> 10

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<213> Artificial

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<223> Sequence of nuclear location sequence contained within the N-term  
inal of IL-alpha propiece

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1 5 10

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<211> 16

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<220>

<223> Signal sequence peptide from Antennapedia homeodomain

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<223> The fibroblast growth factor signal sequence peptide

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Ala Ala Val Ala Leu Leu Pro Ala Val Leu Leu Ala Leu Leu Ala  
1 5 10 15

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<220>  
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Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly Arg Lys Lys Arg  
 1 5 10 15

Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr His  
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Arg Lys Arg Lys Arg Ser Arg  
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Asn Tyr Lys Lys Pro Lys Leu  
 1 5

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<223> Luinus luteus nuclear protein import sequence

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Lys Pro Lys Lys Lys Lys Glu Lys  
1 5

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<223> Sequence of the basic motif in the nuclear protein import sequence of Smad 3 protein

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Lys Lys Leu Lys Lys  
1 5

<210> 10

<211> 11

<212> PRT

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<223> Sequence of intracellular loop of 5HT2A receptor

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<223> Sequence of C-terminal transmembrane 7 domain derived from 5HT2A receptor

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Lys Lys Pro Leu Gln Leu Ile  
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Arg Lys Lys Arg Arg Gln Arg Arg Arg  
1 5

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<220>  
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<400> 13

Gly Phe Leu Gly  
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<400> 14

Asp Asp Asp Asp Lys  
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<220>  
 <223> peptide

<400> 15

Glu Tyr Phe Pro  
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<210> 17  
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<220>  
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<400> 17

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Gly Arg Arg His His Cys Arg Ser Lys Ala Lys Arg Ser Arg His His  
 1 5 10 15

<210> 18  
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<220>  
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Gly Met Asp Tyr Lys Asp Asp Asp Asp Lys Gly Tyr Gly Arg Lys Lys  
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Lys Arg Arg Gln Arg Arg Arg  
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Lys Arg Arg Gln Arg Arg Arg  
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Asp Asp Lys

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Gly Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp Lys  
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Lys

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Gly Asp Pro Lys Lys Lys Arg Lys Val  
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&lt;400&gt; 26

Gly	Lys	Lys	Thr	Gly	Lys	Asn	Arg	Lys	Leu	Lys	Ser	Lys	Arg	Val	Lys
1				5					10					15	

Pro Arg Asp

&lt;210&gt; 27

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Peptide

&lt;400&gt; 27

Gly	Arg	Lys	Gly	Lys	His	Lys	Arg	Lys	Lys	Leu	Pro
1				5					10		

&lt;210&gt; 28

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 28

Gly	Lys	Arg	Val	Ala	Lys	Arg	Lys	Leu	Ile	Glu	Gln	Asn	Arg	Glu	Arg
1				5					10					15	

Arg Arg

&lt;210&gt; 29

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 29

Gly	Arg	Lys	Leu	Lys	Lys	Lys	Lys	Asn	Glu	Lys	Glu	Asp	Lys	Arg	Pro
1				5					10					15	

Arg Thr

&lt;210&gt; 30

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 30

Gly Lys Lys Thr Asn Leu Phe Ser Ala Leu Ile Lys Lys Lys Lys Thr  
 1 5 10 15

Ala

<210> 31  
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<220>  
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Gly Arg Arg Glu Arg Asn Lys Met Ala Ala Ala Lys Cys Arg Asn Arg  
 1 5 10 15

Arg Arg

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Gly Lys Arg Ala Arg Asn Thr Glu Ala Ala Arg Arg Ser Arg Ala Arg  
 1 5 10 15

Lys Leu

<210> 33  
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<400> 33

Gly Arg Arg Arg Arg Ala Thr Ala Lys Tyr Arg Thr Ala His  
 1 5 10

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 <211> 15  
 <212> PRT  
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<220>  
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<400> 34

Gly Lys Arg Arg Arg Arg Ala Thr Ala Lys Tyr Arg Ser Ala His  
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1 5 10 15

<210> 35  
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<220>  
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<400> 35

Gly Arg Arg Arg Arg Lys Arg Leu Ser His Arg Thr  
 1 5 10

<210> 36  
 <211> 10  
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<220>  
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<400> 36

Gly Arg Arg Arg Arg Arg Glu Arg Asn Lys  
 1 5 10

<210> 37  
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Gly Lys His Arg His Glu Arg Gly His His Arg Asp Arg Arg Glu Arg  
 1 5 10 15

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Gly Lys Lys Lys Arg Lys Leu Ser Asn Arg Glu Ser Ala Lys Arg Ser  
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Arg

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Ser Arg Arg His His Cys Arg Ser Lys Ala Lys Arg Ser Arg His His  
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Ser Ala Arg His His Cys Arg Ser Lys Ala Lys Arg Ser Arg His His  
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<210> 42

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Ser Arg Arg Ala His Cys Arg Ser Lys Ala Lys Arg Ser Arg His His  
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<210> 43

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<212> PRT

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<220>

<223> peptide

<400> 43

Ser Arg Arg His Ala Cys Arg Ser Lys Ala Lys Arg Ser Arg His His  
1 5 10 15

<210> 44

<211> 16

<212> PRT

<213> Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 44

Ser	Arg	Arg	His	His	Ala	Arg	Ser	Lys	Ala	Lys	Arg	Ser	Arg	His	His
1				5					10					15	

&lt;210&gt; 45

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 45

Ser	Arg	Arg	His	His	Cys	Ala	Ser	Lys	Ala	Lys	Arg	Ser	Arg	His	His
1				5					10					15	

&lt;210&gt; 46

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 46

Ser	Arg	Arg	His	His	Cys	Arg	Ala	Lys	Ala	Lys	Arg	Ser	Arg	His	His
1				5					10					15	

&lt;210&gt; 47

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 47

Ser	Arg	Arg	His	His	Cys	Arg	Ser	Ala	Ala	Lys	Arg	Ser	Arg	His	His
1				5					10					15	

&lt;210&gt; 48

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; peptide

&lt;400&gt; 48

Ser	Arg	Arg	His	His	Cys	Arg	Ser	Lys	Ala	Ala	Arg	Ser	Arg	His	His
1				5					10					15	

&lt;210&gt; 49

&lt;211&gt; 16

<212> PRT  
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<220>  
 <223> peptide

<400> 49

Ser Arg Arg His His Cys Arg Ser Lys Ala Lys Ala Ser Arg His His  
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<400> 50

Ser Arg Arg His His Cys Arg Ser Lys Ala Lys Arg Ala Arg His His  
 1 5 10 15

<210> 51  
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<220>  
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<400> 51

Ser Arg Arg His His Cys Arg Ser Lys Ala Lys Arg Ser Ala His His  
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<210> 52  
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<220>  
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<400> 52

Arg Arg His His Cys Arg Ser Lys Ala Lys Arg Ser Arg  
 1 5 10

<210> 53  
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<220>  
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<400> 53

Gln Glu Leu Ser Glu Gln Ile His Arg Leu Leu Leu Gln Pro Val  
 1 5 10 15

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<210> 54  
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<220>  
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<220>  
<221> misc\_feature  
<223> X = R, H or K

<400> 54

Xaa Xaa Xaa Xaa  
1